ADVANCES IN MATHEMATICS 56, 192 (1985)

Book Reviews

V. I. ARNOLD, *Catastrophe Theory*, Springer-Verlag, Berlin/New York, 1984, 78 pp. Here is that marvel of marvels, a book that (1) is inexpensive, (2) contains very few formulas, (3) is full of pictures, and (4) is written by one of the foremost mathematicians of our times. Go to the store and buy it at once.

R. BOTT AND L. W. TU, *Differential Forms in Algebraic Topology*, Springer-Verlag, Berlin/New York, 1982, 331 pp.

J. GLIMM AND A. JAFFE, *Quantum Physics*, Springer-Verlag, Berlin/New York, 1981, 417 pp. What do these two textbooks have in common? Simple: they are among the major masterpieces of mathematical exposition in this century. Bott and Tu have written the first attractive book in topology since Alexandoff–Hopf. Glimm and Jaffe show us what happens to physics when one takes mathematics seriously. Let us take off our hats.

J. C. JANTZEN, *Einhüllende Algebren halbeinfacher Lie-Algebren*, Springer-Verlag, Berlin/New York, 1983, 298 pp. This book contains a series of "firsts" in book form, for example, Kazhdan–Lusztig polynomials. A must for anyone who works in a field related to Lie algebras, and that means just about everybody (even if you do not read German).

J. GALAMBOS, *Representations of Real Numbers by Infinite Series*, Springer-Verlag, Berlin/New York, 1976, 146 pp. From time to time a book slips by in an unassuming lecture series that is really a jewel. This is one. It has a unique collection of facts about real numbers not to be found anywhere else. This is the kind of book many of us secretly read.

D. MUMFORD, *Total Lectures on Theta*, Vol. I, Birkhaüser, Basel, 1981, 191 pp. The amazing David Mumford knows how to keep them coming. Every one of his books is a masterpiece, even the ones that are being secretly circulated under a red cover.

GIAN-CARLO ROTA

Editor

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